

2011 National Collegiate Men's and Women's Fencing Explanation of Selection Formulas

Two Primary Factors Determine Selection into the Championships:

1. Fencer's Seeding Factor (FSF) [Weight = 40%]
2. Placement at NCAA regional competition [Weight = 60%]

SELECTION FORMULA:

$$\text{Fencer's Seeding Factor} = \left(\frac{\text{Total Number of Bout Victories}}{\text{Total Number of Bouts Fenced}} \times \text{Season Strength Factor} \right) + \left(0.4 \times \text{Individual Victories Strength Factor} \right)$$

FENCER'S SEEDING FACTOR (FSF)

- The FSF measures a fencer's performance versus his/her opponents during regular-season competition. Therefore, performance during the regular season will have consequences.
- FSF is used to rank/seed competitors for NCAA regional competition.
- FSF is based on three variables:
 1. Winning Percentage $\left(\frac{\text{Total Number of Bout Victories}}{\text{Total Number of Bouts Fenced}} \right)$
 2. Season Strength Factor (SSF)
 3. Individual Victories Strength Factor (ISF)
- Important factors of the FSF:
 1. Opponents' power ratings.
 2. Victory bouts.

OPPONENT'S POWER RATING

- Measures the strength of competitors based on past performances.
- Factors that determine the power rating:
 1. USFA Rank (current by November 24, 2010)
 2. FIE Rank (current by November 24, 2010)
 3. 2010 NCAA championships placement
- Head coaches must submit power ratings of their fencers to the NCAA by December 1 of the current fencing season.

2010-11 POWER RATING SCALE

Power Rating	Qualification
150	FIE Senior 1-8 / FIE Junior 1-3
140	FIE Senior 9-32 / FIE Junior 4-8
120	FIE Senior 33-64 / FIE Junior 9-24 / USFA Senior 1-8 / NCAA 1-4
110	USFA Senior 9-16 / USFA Junior 1-4 / FIE Senior 65-96 / FIE Junior 25-48 / NCAA 5-8
100	USFA Senior 17-24 / USFA Junior 5-8 / NCAA 9-12
90	USFA Senior 25-36 / USFA Junior 9-12
80	USFA "A" ranking / USFA Junior 13-16 / NCAA 13-16
60	USFA Junior 17-24 / NCAA 17-24 / USFA "B" Ranking
40	USFA "C" Ranking
20	USFA "D" Ranking
10	USFA "E" Ranking
1	USFA "U" Ranking / Walk on

*** Freshmen Foreign Athletes should be evaluated by their respective coaches and ranked comparably to the USFA ranking. Their power rating can be upgraded during the season either by their coach or by their region chair. There is a column in the roster/schedule system to indicate that it is an estimate.

WINNING PERCENTAGE

- A fencer's winning percentage is calculated in the following way: $\frac{\text{Number of Bouts Won}}{\text{Number of Bouts Attempted}}$
- All bouts fenced during the regular season are considered.
- Rationale for taking into consideration a fencer's winning percentage: The fencer who wins more bouts should be rewarded rather than one who wins less bouts

SEASON STRENGTH FACTOR (SSF)

For selection purposes, a fencer's season will be characterized by how he/she does against opponents who comprise the first 60 percent of the most difficult bouts (i.e., highest rated opponents by power rating) fenced only.

- The SSF statistic is multiplied by the winning percentage for all bouts fenced during regular season competitions.
- This provides some incentive for teams to schedule approximately 40 percent of their bouts against opponents with lower power ratings.

EXAMPLE: If a fencer had a total of 25 bouts, 60 percent of those bouts equal 15 bouts (round up to the nearest whole number). The power rating points of the top 15 opponents are then added up (regardless of who won) and that number is then divided by 15 for the SSF.

Total Number of Bouts x 0.60 = Z

25 x 0.60 = 15

Opponents' Power Ratings:

1. 40
 2. 60
 3. 40
 4. 80
 5. 100
 6. 120
 7. 60
 8. 80
 9. 40
 10. 20
 11. 120
 12. 0
 13. 60
 14. 80
 15. 40
- 940

$\frac{\text{Sum of Power Rating Pts. of Top 60\% Opponents}}{Z} = \text{Season Strength Factor}$

$\frac{940}{15} = 63 \text{ (62.67) SSF}$

SSF IS USED IN THE FIRST PART OF THE EQUATION: $\left(\frac{\text{Total Number of Bout Victories}}{\text{Total Number of Bouts Fenced}} \times \text{Season Strength Factor} \right)$

INDIVIDUAL VICTORIES STRENGTH FACTOR (ISF)

- The ISF measures the strength of the opponents against whom victories were gained.
- Victory bouts against opponents with the highest power rating will be ranked first.
- After the bouts are ranked as indicated above, the ISF will be based on the best 50 percent of all the (ranked) victory bouts. If the number of victories exceeds 32, only the top 16 victories will be taken into account. If an odd number of bouts exists, then the better bout down should be used.

EXAMPLE: If a fencer won 11 bouts, an odd number, then the top five or six (50 percent of 11) power ratings of opponents from those bouts won should be used. Take the average of those top five or six power ratings and you have the ISF.

1. 60
 2. 80
 3. 100
 4. 80
 5. 120
 6. 100
- 540

Average: $\frac{540}{6} = 90$

ISF IS USED IN THE SECOND PART OF EQUATION: $(0.4 \times \text{Individual Victories Strength Factor})$

$0.4 \times 90 = 36$

36 should be entered into the second part of the equation.

RESULTS

- Fencers qualify for the NCAA regionals on the basis of their FSF.
- Each school can qualify up to 12 fencers per gender (maximum of five per weapon):
 - Fencers qualify in order of priority based on their FSF statistic among fencers in their region; and
 - Fencers must have fenced in:
 - A minimum of 18 regular season bouts; and
 - A minimum of half of their regular season dual meets in the same weapon.
- Fencers qualify for the NCAA championships on the basis of two factors:
 - 40 percent weight is placed on FSF + 60 percent weight is placed on placement in NCAA regionals.
 - Each school can qualify up to two fencers per gender, per weapon, up to the region's limit of allocations per gender per weapon.
- The regional champion at each regional will automatically be considered for allocation for recommendation to participate in the championships.
- If the institution has more than two qualifiers, it will be an institutional decision as to who will be recommended.